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NEW SOVIET MACHINE TOOLS

NEW TURRET LATHES FOR INDUSTRY -- Moscow, Moskovskaya Pravda, 7 Feb 53

At the Moscow Stankokonstruktsiya Plant, a commission of the Ministry of Machine Tool Building has approved a new automatic turret lathe developed by the Experimental Scientific Research Institute of Metal Cutting Machine Tools.

The changing of speeds and feeds on the new machine tool is accomplished automatically by a special control apparatus, without stopping the operation. The power of the new machine tool is twice as high as of conventional models.

The institute is also furnishing industry with universal turret lathes for processing parts up to 450 millimeters in diameter. The parts are machined to a high degree of accuracy. In contradistinction to earlier designs, this machine tool has a hydraulic system for changing speeds and feeds, controlled by a single lever. Required operating conditions can be preselected. In addition, the need for turning the turret head by hand every minute or two has been eliminated.

Labor productivity on the new machine tools is being increased 1½ times.

Enterprises will begin series production of the new machine tools in the near future.

COMPLETE TESTS OF NEW MACHINE TOOLS -- Moscow, Komsomol'skaya Pravda, 10 Feb 53

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Testing of a group of new-model metal-cutting machine tools had been completed recently.

Among this group is the Model 1P365 turret lathe intended for high-speed metalworking. [redacted] 50X1-HUM

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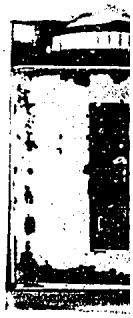
Model 1P365 is equipped with a 14-kilowatt motor. The machine first turns a workpiece and then drills it. The outstanding feature of this model is that the speed for drilling can be selected during the turning operation and can be shifted without stopping the machine. The workpiece rotates at a speed of 1,500 revolutions per minute for the drilling operation.

The new model is 30-40 percent more productive than existing models.

Another machine tool in this group is the Model 1P318 turret lathe. [redacted] Its spindle speed reaches 6,000 revolutions per minute. It is 40-50 percent more productive than older models of this type and pays for itself after 9 months of operation.



An outstanding Soviet achievement is the Model 528 gear-cutting machine for cutting spiral bevel gears. The author of the present article states that this high-precision machine tool excels the most modern foreign models in productivity and range of work. According to the author, the better machine tools of this type produced by the U. S. Firm, Glisson /possibly refers to the Gleason Works in Rochester, N. Y./ have a cutting speed of only 60 meters per minute, whereas a cutting speed of 200 meters per minute has been achieved on the new Soviet machine.

In testing, one tooth was cut with a high-speed steel tool in 19 seconds. Twice the amount of time is required to perform this operation on the Gleason machine tools, according to the author. In operating with hard-alloy tools at high speeds, the effectiveness will be greater. -- B. Protopopov

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